EMERGENT PLANTS

COMMON REED (*Phragmites australis*)

This reed is a native of Europe. The plant is comprised of a tall stem (3-14 ft.) with a reddish to silver flowering head, and extensive rhizomes (creeping root systems) from which new plants arise. Common reed can tolerate a range of salinities, allowing it to grow in coastal areas and around inland lakes, ponds, and rivers. This plant is scattered throughout New Hampshire.

FLOWERING RUSH (*Butomus umbellatus*)

This attractive rush is a native of Europe and Asia. The plant produces large showy pink flowers during its fertile phase. The stems and leaves of the plant may be tape-like during high water, or erect during times of low water. This plant has not yet been documented in New Hampshire, but is well established along the Connecticut River in Connecticut, and in the Lake Champlain watershed in Vermont. Flowers appear between June and August.

PURPLE LOOSESTRIFE(*Lythrum salicaria, and cultivars*)

This purple flowering plant has taken over thousands of acres of wet and moist areas in New Hampshire. Purple loosestrife is an emergent perennial with opposite leaves on a woody stem, and a long spike of purple flowers. Flowering occurs from late July to September. Avoid planting this species in your garden as it is quick to colonize large areas.

Native aquatic plants provide a number of beneficial functions in waterbodies, including:

- oxygen production
- sediment stabilization
- habitat for fish, insects, and other aquatic life
- nutrient attenuation
- shading

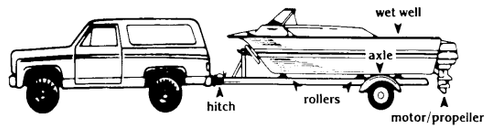
Exotic aquatic plants, however, may be devastating to the waterbodies which they invade. Since these exotics have no natural enemies, they can essentially grow unchecked in New Hampshire waterbodies.

Sources of these plants include transport of fragments from southern states by boat, introductions from the nursery trade, and the dumping of home aquaria to New Hampshire waterbodies. As these exotics begin to grow out of control, they may stunt fish growth, outcompete native vegetation, inhibit boating and swimming, and cause a decline in oxygen when the plants begin to decompose.

These fourteen species were listed due to their existing or potential adaptation to New Hampshire waterbodies. Of the fourteen species, six have already become problematic in New Hampshire.

You can avoid spreading these plants by cleaning your boats, trailers, diving equipment, and fishing gear of all plant fragments. Dispose all plant fragments away from waterbodies. Also, monitor your selections at nurseries and aquarium retail locations. Are you purchasing a native species, or an exotic? **Per RSA 487:16-a, it is now illegal to sell, distribute, import, purchase, propagate, transport, or introduce any of these 14 plants in New Hampshire.**

Always check in these places for tag-along plants before and after you launch your boat.



For More Information

The NHDES Exotic Species Coordinator is available to identify plants, provide informative materials, give presentations to groups, and distribute signs for posting at boat launches. Please contact the Limnology Center if you are interested in any of these services or materials.

To learn more about exotic aquatic plants, or to report a sighting of one of these plants, please contact the Exotic Species Coordinator at:

NH Department of Environmental Services
Water Division
6 Hazen Drive
Concord, NH 03301
(603)271-3503
www.state.nh.us

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

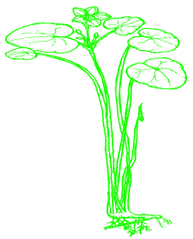
Illustrations by Stephanie Bowser and Jen Drociak

STOP the Spread of Exotic Plants

Fourteen exotic aquatic plants have been listed as prohibited species in New Hampshire due to their proven and potential abilities to choke surface waters, harm native vegetation and wildlife, and impact activities of water recreation-alists. This pamphlet describes the fourteen species, and how to help prevent their spread.

FLOATING LEAVED PLANTS

YELLOW FLOATING HEART (*Nymphoides peltata*)



This Eurasian native has small heart-shaped floating leaves and showy yellow flowers. The plant may resemble native floating heart, but the flowers are much showier in the exotic. This plant, which is dispersed by seed, has not yet been documented in New Hampshire. Flowers appear from June to September.

FROGBIT (*Hydrocharis morsus-ranae*)

This exotic also resembles native water lilies. The plant has round floating leaves and white flowers with three petals. Frogbit is a native of Europe which has invaded slow moving waters in this country. Frogbit has not yet been documented in New Hampshire, though it has been documented in Lake Champlain in Vermont.

WATER CHESTNUT (*Trapa natans*)

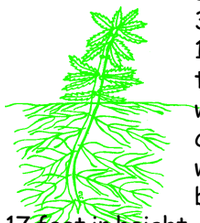
Water chestnut became a problem in New Hampshire in 1998. The plant, a native of Europe and Asia, was recently identified in the Nashua River. The plant produces a barbed fruit with very sharp spines which can persist for eight years in the sediments. A rosette of leaves floats on the surface of the water, connected by a thin stem to the sediments. The plant flowers from June to September.

SUBMERGED PLANTS

Milfoil species are characterized by feathery leaflets whorled around a main stem. The plants send up emergent flowering stalks with small flowers that have distinctive small green leaves below them that are important in identification. Fragments that break off from plants and grow roots are the primary form of reproduction and spread.

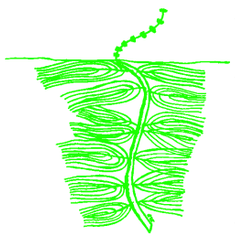
There are many species of milfoil which are native to New Hampshire. To distinguish between the native and exotic species is often difficult without flowers. Typically, however, the exotic species of milfoil have very thick stems, and grow in dense beds that are two or more feet in height. The milfoils flower from July to August in this climate.

VARIABLE MILFOIL (*Myriophyllum heterophyllum*)



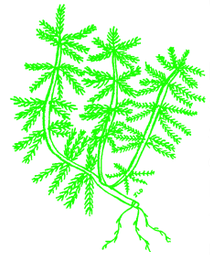
In New Hampshire, this is the most problematic milfoil species, infesting 36 waterbodies as of fall 1998. This plant is native to the southern United States where it does not grow out of control. In New Hampshire waterbodies, this plant has been documented to reach 10-17 feet in height.

EURASIAN MILFOIL (*Myriophyllum spicatum*)



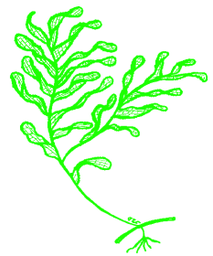
This milfoil species is native to Europe and Asia, and is only in two waterbodies in New Hampshire. This species prefers more alkaline, or harder, waters like those found in neighboring Vermont. Plants may be 10-15 feet in height. This plant is a nuisance in many areas throughout the United States.

PARROT FEATHER (*Myriophyllum aquaticum*)



Parrot feather is native to southern North America. This species has been introduced as a popular aquarium plant, but can grow to several feet tall in the natural environment. The leaflets are smaller than the other milfoils, and yield a dense 'feathery' appearance. This plant has not yet been documented in New Hampshire.

CURLY-LEAF PONDWEED (*Potamogeton crispus*)

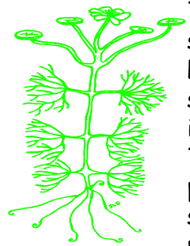


This exotic is a native of Europe. The leaves of this exotic species are oblong with fine irregular teeth on the edges. Leaves are crisp and wavy. Curly-leaf pondweed prefers more alkaline waters. This species has not yet been documented in New Hampshire.

BRAZILIAN ELODEA (*Egeria densa*)

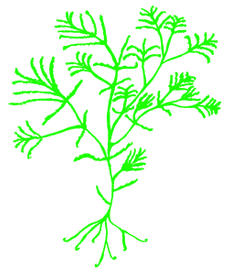
This native of South America is sold in pet stores for use in home aquaria. The plant is free floating with three to five light-green leaves in whorls. This species is easily confused with the exotic *Hydrilla*, as well as with many native species. Leaves are very finely toothed along the margins. The plant forms whitish flowers that float at the surface of the water. Brazilian elodea reproduces by fragmentation. This species has not yet been documented in New Hampshire.

FANWORT (*Cabomba caroliniana*)



This plant is a native of the southern United States and Latin America. In New Hampshire, this exotic species has infested five surface waters. The leaves of this submerged plant are bright green, opposite, and fan shaped. When the plant is flowering it develops tiny lily-like leaves that float on the surface. The flowers are white and extend above the water's surface. The plant flowers from June to September.

EUROPEAN NAIAD (*Najas minor*)



This native of Europe has been introduced into lakes, ponds, slow moving streams, and eutrophic or alkaline waters. This exotic has not yet been found in New Hampshire. Plants are dark green and grow to about 10 to 20 centimeters. Narrow toothed leaves become recurved (curled backwards) with age.

HYDRILLA (*Hydrilla verticillata*)

Hydrilla is naturally found in Africa, Australia, and Asia. This exotic plant has whorls of four to six leaves which may be slightly reddish in color. This plant may be easily mistaken for Brazilian elodea. Hydrilla has become a nuisance in a number of states, including Florida. This plant has not yet been documented in New Hampshire, but has been sighted in Connecticut.